



**National
Aerospace
Laboratories**

Class *Unrestricted*

No. of Copies 8

Title Fundamental Concepts in Infrared Radiation

Author/s C K Srinivas, R M Jha

Division ALD

NAL Project No: A-8-602

Document No. PD AL 0510

Date of issue August 2005

Contents Pages Figures Tables References

External Participation Nil

Sponsor x

Approval Head, ALD

Remarks x

Keywords Infrared Radiation, Blackbody Radiation Laws, Radiometric Quantities

Abstract

This report discusses fundamental concepts concerning IR radiation characteristics of substances. Radiometric parameters, which are used to represent angular and spectral distribution of IR radiation from substances, are described. The fundamental laws governing blackbody radiation are reviewed. Finally, these concepts are extended to obtain radiation characteristics of real surfaces. All these concepts lead to obtaining fundamental parameters to control IR signatures of targets.